THE STEM OF MOST LEARNING — "I WONDER"

Has "The System" Programmed Most of Our Learning?

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"Have you ever wondered," is a most interesting inquiry because the answer is "of course." Why would anyone ask a question like that? Because the question is the stem of most learning. The child that climbs to the roof of the garage is responding to wonder. Wonder is drawn from within, and not hosed or sprinkled on the individual from an external authority. It has meaning and in most cases, consequences. If you think back to the learning events that are most imprinted in your mind, they will most often be associated with a trauma, good or bad. The higher the perceived consequence, the deeper the imprint.

"The System"

So what happened? Why do we as a society think that education is throwing money at an oratorical "wizard" standing in a pit pontificating. And educational worth is enumerated by the number of people taking notes at the same time. Generally, the worth of these "wizards" is determined by their price or the applause they can engender, and has nothing to do with their quality or the quantity of notes taken. It certainly has nothing to do with any learning that may have taken place.

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Perhaps this analogy may appear a bit absurd, and it certainly is a dramatization. However, consider this: the only thing more absurd is that most of the people taking the notes do not want to be there. Society — "The System" — has taught us to "get the ticket punched" and have a better life or at least survive. Learning, therefore, becomes programmed, often stifling the "I Wonder" of the child within us.

Programmed and Inquiry Learning

The system has programmed the learning for us. Programs abound — one for doctors, one for nurses, another for engineers, etc. Program managers even have one. It seems everyone has a program, which quite often has little relevance to reality or the certification acquired. But what happened to that child-like wonderment? What happened to the "why" — a refrain familiar to all parents? What happened to the thirst for knowledge — the "what if's": what if I climb that garage; what if I push that button; what if turn that knob; what if I do it this way instead of how I've always done it before?

Do you notice that each "what if" is associated with "doing" — with some action — and always evokes a question? Thus, the "what if's" are, in reality, the onset of a form of experiential learning. They do not detract from the relevant programmed learning; they simply express "I want to know more."

My favorite example, relates to my own experience with my grandfather. He liked to work with wood, so one day we started a project together, building a stool. "You sit, watch and listen," were his first instructions. Then, "with great discipline," he taught me about the tools: their care, their storage, the dangers involved, and finally their use. When he was sure I understood the tools, he built a three-legged stool. I watched, and was sure I knew how to build the stool. However, when I tried, I failed. The seat cracked; I drilled too deep — anything that could go wrong *did* go wrong.

With great patience, "we" built a second stool together. He was a wonderful coach, and then he said, "you build one and I will watch." I did. It wasn't very pretty, but it was a stool. Even though we now were up to our eyeballs in stools, we had accomplished some rather sophisticated programmed learning. Since most people never get beyond the "knowing about the tools" stage, I was feeling pretty proud of my efforts.

Several projects later, actually years later, I built another stool, but with some "what if's": what if I changed the shape of the seat; added another leg; used a different type of wood; or...?

And I started thinking about the effect of wood grain and the wood itself. Without realizing it, I worked my way through some thought processes that approach a simple analysis. Yes, it was a fine stool — but not perfect.

It wasn't until college that my curiosity really took over, and I began studying far beyond "the program" curriculum about woods, designs and finishes; at this point, again without realizing it, I entered the realm of inquiry learning.

Today I can build a professional quality stool. I can walk into a store, look at a stool and identify the quality, the cost and the labor involved. In a very simple example, I've discussed most stages of learning by almost any taxonomy.

Although programmed and inquiry learning are the most common learning elements, there is yet a third element that is indirectly spoken to in the "building a stool" example: the learning environment. It includes not only the ability to get the information, but also the social environment that invites curiosity, that sponsors the search and the discovery, that enables people to learn safely from their "not

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yet" successes. Errors, mistakes or failures, in my grandfather's view, were "not yet" successes. If he had, in any way, shown displeasure with my lack of knowledge about his tools, my inability to use them, or even the damage to them that I know I caused, I would not have progressed through the various stages of learning.

A culture that rewards success and punishes "not yet" success is not a learning culture, if for no other reason than the fact that little is to be learned from success. Success can be attributed to the alignment of the stars or even a lot of things going right without our knowledge. Learning is the finding out which one of "a lot of things" was out of alignment, resulting in a "not yet" success; figuring out how to put it into correct position for success, and then trying it one more time.

Synergism

Synergism is a relatively common phenomenon in business, pharmaceutical, learning and many other activities. According to Webster, it is the simultaneous action of separate entities, which together have a greater total effect than the sum of their individual effects. When an individual can wonder, think or query in a safe environment, the next step is to seek other thinkers — others that are empowered, others that have walked the trails before them, others that have experienced "not yet" successes. Everyone is an expert in something. When we reach this stage, yet another phenomenon occurs — transference. Transference is the ability to take any experience and cognate it to a seemingly unrelated experience. As an example, how does a pot-luck lunch relate to a construction project?

Diversity

Diversity becomes very important; it begs of challenges to assumptions, to perceptions, to boundaries long forgotten. An old acquaintance once said, "If I find myself disagreeing with someone, it's probably because I don't understand them or what they saying." Great wisdom abides in that statement because, for the most part, people do try to help one another or at least stay neutral. They come to the inquiry from different backgrounds, with different experiences, and with different thought processes. It's OK to disagree and to challenge — as long as you understand that the other party believes their perspective is correct, even though you may know with certainty that their perspective is decidedly incorrect. If this is understood, then reframing of the problem can occur. New windows open, and the inquiry may then be looked at from different angles.

Puzzles, Problems and Issues

Puzzles, problems and issues present important concepts in learning, because rare is the person who truly learns for the sake of learning. It does happen, but for the most part people learn to enable them to do something, even if that something is merely to "look important" or "punch the right ticket." So what are the differences between puzzles, problems and issues?

- Puzzles have a singular solution, so when presented with a puzzle, the right strategy is "just do it." Although it may be a test of cleverness or skill, it is a non-problem. Simplistically, once you complete the puzzle, it will look like the picture on the box.
- Problems can be defined as ill-defined situations that can have many solutions or considerations — they're complex; they have consequences.
- Issues are less complex problems you can resolve. If you can preface your inquiry with "how can I," and the problems presented are truly within your authority to solve, then you are dealing with issues.

Puzzles are fun. We have all experienced doing something that was fun. Usually, we already knew how to solve a puzzle with minimal training; the challenges were slight. Problems, on the other hand, are philosophical: pontification runs rampant; assumptions are numerous. Changing the current acquisition culture, for example, is one of many problems to be resolved in the area of acquisition reform. Problems may require resolution of many issues. My car stalls on the highway; I'm out of gasoline — I have serious problems. But my issues become, "how can I get help" or "how can I get to where I'm going"? Issues, therefore, become the sources of most day-to-day learning experiences. How do we differentiate issues in our daily learning experiences, and more importantly, how do we learn from them? There are several approaches; all are acceptable. All are as complete or as incomplete as the situations to which they are applied.

- Identify symptoms in an environment.
- Brainstorm apparent and implied issues.
- Identify major issues and consolidate minor issues.
- Triage major issues based on an analysis of the impact of doing nothing.
- Develop viable alternative plans of action.
- Select an alternative plan of action for implementation based on mitigating the impact.
- Attempt implementation.
- Assess a "not yet" success.
- Modify the action plan or revisit other alternatives based on the assessment.
- Potentially repeat the cycle, as needed.

Conclusion

The highest form of learning is not achieved in the classroom listening to or working hypothetical problems; or working puzzles that have no real consequences. Nor is it accomplished in seminars listening to "experts" speak to their past successes. It is the same source of the Edison light bulb, the atomic bomb, our Top Gun pilots, and the Iacocca's of the world. And it all starts with..."I wonder."